REMARKS

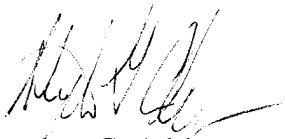
The above amendments are presented to remove the Amendments filed 9/9/99 and 12/14/01. Furthermore, a typographical error has been corrected. The above amendments render the new matter objections moot. Accordingly, entry of the amendments after final rejection is earnestly solicited.

A marked-up version showing the changes made by the present amendment is attached hereto as "Version with markings to show changes made."

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully Submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP



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Attachments: Version with markings to show changes made
Petition For Extension of Time

VERSION WITH MARKINGS TO SHOW CHANGES MADE 09/392,722

IN THE SPECIFICATION:

The specification has been amended as follows:

Paragraph beginning at page 13, line 17 has been amended as follows:

Referring to FIGS. 6A-6F, processing steps for fabrication of an integrated electronic device having electric connection made of In-Ga liquid metal between a semiconductor chip and a circuit board are described. Ga-rosin mixture was prepared before fabrication of the liquid In-Ga electric connection, for which Ga was mixed with a flux vehicle at mixing ratio of 9 to 1 in weight. After the Ga mixed flux vehicle was heated at 40 °C to melt Ga in it, it was stirred until fine Ga droplets of about 20-30 μm diameter were dispersed homogeneously in the flux vehicle. The flux vehicle was monobutylcarbithol including 60% rosin, 2% [thichener] thickener, 0.5% activator (hydrochloric diethylamine). The semiconductor chip 21 shown up-side down in FIG. 6A, has an array of electrodes 22A-22F on a surface of the semiconductor chip. The first metal mask 31 made of covar was pressed tightly to the surface of the semiconductor chip so that an exposed area of the surface was masked. A 10 μm thick indium (In) film 23 was deposited on the entire surface of the semiconductor chip by evaporation technique. As shown in FIG. 6B, an array of In-coated electrodes was obtained by removing the first metal mask 31. As shown in FIG. 6C, a 200-300 μm thick Ga-rosin mixture 24 was selectively squeezed into each of windows of the second metal mask 32 having a thickness of 200-300 μm by a squeezer just as used in a printing technique. After removing the second metal mask 32 left a bump of Ga-rosin mixture 24 on the In-film 23, the semiconductor chip was heated at 200 °C so that Ga in the Ga-rosin mixture 24 and the

underlayered In-film 23 were united to each other by eutectic reaction and vaporizing organic components as shown in FIG. 6D. 100 μm high In-Ga liquid connections 27A-27F made of an eutectic alloy between Ga and In were formed on each of the array of the electrodes 22A-22F shown in FIG. 6E. The eutectic reaction proceeded at the interface indicated by a dotted line 23 between In and Ga, which prevented the electrodes from repelling the liquid connection. As shown in FIG. 6F, the semiconductor chip 21 having an array of the liquid connections 27A-27F was mounted on a circuit board 26 having an array of electrodes 25A-25F by flipping the semiconductor chip 21 so that the liquid connection of the semiconductor chip and the electrode on the circuit board was aligned to each other with a certain height by maintaining a certain distance between the semiconductor chip and the circuit board by a spacer 28. The appropriate height of the liquid connection was 100 μ m. In the foregoing embodiment, the surface of the electrode has such a good adhesive tendency to a liquid connection that the entire surface of the electrode is covered with the liquid metal, which eventually reduces the electric resistance of the connection. Indium of the eutectic alloy is replaceable by tin (Sn), [silver (Ag),] or zinc (Zn).